Mount Revelstoke and Glacier National Park
LPRT Evaluation Project Report

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1. EXECUTIVE SUMMARY

Background

As part of the IMU Plan for Rogers Pass (1976) three low powered radio transmitter (LPRT) sites have been developed to broadcast limited range repeating radio messages on the AM broadcast band.

These programs were designed to orient visitors to Mount Revelstoke/Glacier National Parks, inform them of the facilities and services available, and to provide information on possibly hazardous conditions.

The LPRTs have been in operation since 1979 in Mt. Revelstoke and Glacier National Parks. Retrospective questions were raised as to the education value, the efficiency and effectiveness of the program and the future of the project. To provide answers to these questions an evaluation was undertaken. This evaluation determined

1. visitor information gain and reaction to the programs.
2. visitor use of the radio programs.
3. visitor preferences regarding information content.
4. demographic characteristics of users and non-users.
5. visitor expectations regarding the radio programs.

The evaluation was carried out over the summer of 1983. Data collection was scheduled from July 04 to July 30 but was forced to stop due to the Wolsey Creek Bridge washout on July 12. Data collection began again August 23 and was completed on August 31, 1983.

Data was collected by interviewing park visitors and using a mailback questionnaire. Interviews were conducted at five sites throughout the two Parks. A total of 706 people were interviewed. The questionnaire was handed out at the Park gates by Visitors Services Personnel and was returned by the visitor to Rogers Pass Centre, to drop-off boxes at the gates or by mail to Regional Office. Response was good, with 300 being returned (16% of of those handed out).

Assistance with data collection and data analysis was provided by the Socio-Economic Branch, Ottawa.

Strengths of the Program

1. Large potential audience

Of the visitors responding to the survey questions about 29±4% tried to receive the LPRT program and about 18±2% were successful in hearing it. Although this points to a problem with visitor ability to receive the broadcast it further indicates that, if all visitors who try to tune in were able to receive the radio program, the audience of the program would be large, approximately 5000 visitors per day.

2. Main messages achieved predetermined targets

Major messages presented by all the LPRT programs were being received by visitors. These messages include:

1. visitors are in Mt. Revelstoke or Glacier National Park
2. visitors are in the Columbia Mountains
3. visitors can obtain further information concerning the Parks at Rogers Pass Centre

The programs can be considered successful in presenting these messages. In addition the program was lso successful in attracting visitors to the Rogers Pass Centre.

3. Visitor knowledge gain of major messages is statistically significant

Visitors who had listened to the program knew the major messages more often than those who hadn't heard the program. This knowledge gain from the program was significant, however no target had been set for knowledge gain. Therefore it cannot be considered successful or unsuccessful.

4. 17 of 23 specific messages were successful

Each of the three programs has specific messages. The target percent of visitors knowing the information was reached for 17 of 23 messages. For most of these messages visitors also showed a significant knowledge gain after listening to the programs.

5. Positive visitor response to program

Visitors to the Park are interested in hearing information on Park facilities and services and on the cultural and natural history of the Park. Visitors who listen to the program find it interesting, easy to understand and the content sufficient. The existing program seems to provide the types of information the visitors require.

Weaknesses of the Programs

1. Technical capabilities of the LPRT

A number of problems relating to the technical capabilities of the LPRTs affected the results of this evaluation. These technical problems have been discussed in the LPRT Systems Technical Evaluation (P.C. Workshop Engineering, 1983). Essentially the units are not operating at full capacity.

2. Short broadcast range

The range of the broadcasts are extremely short, about 1 to 2 km. This allows only a short program to be heard completely. The LPRT Technical Evaluation has indicated that the range of the LPRT could be increased substantially. This would allow a longer, professional quality program to be broadcast.

3. Too many messages

Each program attempts to convey too many messages. This has resulted in some visitor confusion and some information not being picked up by visitors.

4. Some redundant information

In some cases, pertaining to information about the picnic areas and campgrounds, visitors already know or assumed these facilities were available and open. During the summer this information may not be required on the radio program.

5. Program quality

The quality of some programs produced using Park specifications was also poor, mainly in the script presentation, and in the script. The program must be presented at a speed that is clear enough to understand.

The script should be clear, concise and interesting. If visitors do not hear good quality programs they will not consider them worthwhile listening to.

6. Lack of visitor understanding of low powered radio

One of the major concerns evidenced by this report is that many visitors do not understand what the system offers and how to receive it. Some visitors tried to receive the program throughout the park while others tried to pick up the transmission at the limit of the broadcast and had poor reception.

At present the Information Radio signs are placed about 0.5 km. before the broadcast range. If visitors try to tune in at the sign the reception is poor or cannot be heard.

Visitors also did not understand what was being offered on the program. Many thought that information on road conditions, emergencies and weather was being transmitted. They may not have wanted to listen to that information and therefore, did not try to tune in to the radio program.

7. Maintenance and monitoring of the LPRT required

The LPRT also requires constant maintenance and monitoring to ensure the transmitter is operating. During this evaluation there were some breakdowns which were not rectified for a number of hours. A monitor which would indicate when a transmitter is down would reduce this problem. In adition daily maintenance of the transmitters would reduce downtime.

Overall Assessment

The present low powered radio system has a number of problems that should be dealt with to provide effective media. Despite the problems that do exist the results of this survey indicate that there is a large potential audience, that visitors are interested in hearing the information presented in the programs and that visitors who do receive the broadcast are satisfied with the service.

Major Recommendations

1. **The broadcast range and quality should be maximized by implementing the recommendations in the Technical Evaluation Report, 1983.**

This should greatly increase the range, enabling visitors to receive the program easier and clearer.

2. **Park Staff should be trained to properly maintain and operate the LPRT.**

   This would include cleaning and checking the tape player and maintaining logs on a daily basis.

3. **New tapes of professional quality with fewer messages should be produced.**

   The messages of the program should be reassessed and new programs written and produced in co-ordination with the WRO A.V. unit. The programs should meet professional broadcast standards, and messages should be delivered clearly, critical messages being repeated as necessary within the program.

4. **A monitor should be installed to inform personnel when the transmittor or tape player malfunctions.**

   At present this would be feasible only at manned sites such as the West Gate and Rogers Pass Centre. Installation of such a monitor would reduce downtime and allow malfunctions to be repaired quickly.

5. **Place the Information Radio sign where a reliable, listenable signal can be received by an A.M. receiver.**

6. **The low powered radio should be clearly advertised in brochures and pamphlets within the park.**

   This advertising should outline the function and content of the radio programs.

7. **A regional low powered radio implementation strategy should be developed via the A.V. Media Specialist.**

   This strategy would outline the Park responsibilities in LPRT operation, and a regional advertising strategy. This advertising should clearly outline the function and content of low powered radio programs.

Implications to Other Low Powered Radio Programs

1. A feasibility study should be carried out before purchasing and installing equipment for new sites. This should include possible broadcast range, ease

of operation of the equipment, servicing equipment and accessibility.

2. Standards of quality should be set out and integrated in all regional low powered radio systems. These should include broadcast quality, program quality tape length compared to the broadcast range and a maintenance and check schedule.

2. EVALUATION METHODOLOGY

2.1 Procedures

The Low Powered Radio evaluation tested the radio programs at the East Gate, at Rogers Pass and at the West Gate in Mt. Revelstoke and Glacier National Parks.

At the initiation of the evaluation it was necessary to redefine the program objectives as existing objectives were not measurable. Following this target percentages were identified for each objective. These defined the ideal criteria for measuring objective success.

To determine how close the programs are to achieving the targets this evaluation was carried out. It consisted of visitor interviews and handout questionnaires.

Interview data was collected at seven sites throughout the Parks: two pulloffs east of the snow sheds, Rogers Pass Centre, Rogers Pass gas station, Illecillewaet Campground, Giant Cedars and Skunk Cabbage Picnic Areas.

Interviews were kept short (less than two minutes) by utilizing six questionnaires.

a. Questionnaire A - Overall

This questionnaire measured the overall objectives (see Appendix E), the major information supplied by all three broadcasts. This included orientation to the Parks, the Columbia Mountains and to Rogers Pass Centre.

b. Questionnaire B - East Gate

This questionnaire measured the objectives of the East Gate radio program such as locations of picnic sites, the Rogers Pass Centre and specific features of the Columbia Mountains.

c. Questionnaire C - Rogers Pass

The Rogers Pass program specific objectives such as orientation to the Pass, its cultural history and facilities and information available at the Centre were covered by this questionnaire.

d. Questionnaire D - West Gate

This measured the specific objectives of the West Gate radio program such as the location of the Picnic Areas, features of the Columbias and information about Rogers Pass Centre.

e. Questionnaire E - Behavioural

Information about visitor behaviour ie. whether or not visitors see the existing road sign and understand what the program provides, tune into the transmissions and stop in the Park, were obtained from this questionnaire.

f. Questionnaire F - Demographic

Visitors' opinion regarding the radio programs, their usefulness and the information visitors would like to hear, as well as general visitor characteristics were determined from this questionnaire.

g. Hand Out Questionnaires

In addition to the above interview questionnaires, Questionnaires A,B,D,F were printed on cards and handed out at the East and West Gates. Instructions on the card informed visitors where the cards could be returned (at Rogers Pass Centre, at drop off boxes at each gate or mailed to WRO). Upon the return of a questionnaire, the visitor was given a Parks Canada Centennial Poster.

Further information on the methodology can be obtained from the Mt. Revelstoke/Glacier National Park: LPRT Evaluation Planning Report, Boyle, 1983.

2.2 Sample Population

Visitors were interviewed at the seven sites previously mentioned. As the visitor entered the site, the evaluator approached and asked if he/she would answer a few questions. If the visitor responded positively, the questionnaire was administered. A total of 706 people were interviewed (for further information see Appendix D).

Questionnaires were handed out to all vehicles except commercial traffic. A total of 1829 cards were handed out, and 300 (16%) were returned.

2.3 Tapes

The tapes being transmitted prior to this project had deteriorated due to amount of use and, in addition, required updating to include information on the new Rogers Pass Centre. Therefore new tapes were required. Attempts were made to produce new tapes within the Park but efforts were unsuccessful. Using the Park script the A.V. Media Specialist in WRO made new tapes. These versions of the program were of high technical quality and produced to a rate of speech generally considered acceptable within the broadcast community to the type of subject matter being presented. However a combination of writing style and inclusion of excessive material for the broadcast range available resulted in a program that could not be listened to in its entirety within this range. In an effort to make the whole message (as written by the Park) available in this range, a shorter version of the same script was produced that came closer to meeting the time criteria. In order to determine which version was more effective (if either), a comparison of the tape versions was made at Rogers Pass.

Throughout the data collection no special conditions ie. goats on the highway or campgrounds closed, were in effect. Therefore objectives pertaining to special condition tapes were not evaluated.

2.4 Schedule

Data collection began July 04 and was originally scheduled until July 30, 1983. However, on July 12, Wolsey Creek Bridge washed out and the Trans Canada Highway subsequently closed. As a result the project was postponed. The project was restarted on August 22, and data collection was finally completed on August 31, 1983. The delay in data collection did not adversely bias the study. The data collection schedule can be found in Appendix B.

2.5 Resources

Data collection was carried out by I. Jurewicz (SEB, Ottawa) and by C. Boyle (WRO). Socio-Economic Branch, Ottawa also provided advice throughout the project.

Traffic flow counts for each site were obtained by M. Brunell's Traffic Survey crew. Mount Revelstoke and Glacier National Parks Visitor Services gate personnel assisted with handing out and collecting questionnaires.

A rental vehicle was available throughout the data collection period.

2.6 Results and Analysis

The data obtained was analyzed to determine the information visitors knew before and after listening to the radio program, the knowledge gain from listening, the percent who actually listened or tried to listen to the program and visitors' attitudes about the program. The method of analysis is detailed in Appendix D.

The results are expressed in percentage and show 95% confidence limits (i.e. 86$\pm$ 7% know they are in the Columbia Mountains). This means that in 90 of 100 surveys such as this, the results will lie within the estimated range.

Knowledge gain was calculated by comparing the results of visitors who had listened to the program to those who had not listened. (see Appendix D, pg. 5).

A significant knowledge gain indicates that there has been an increase in knowledge. If the gain is insignificant then there is no statistical evidence of knowledge gain.

3.0 RESULTS AND DISCUSSIONS

3.1 Overall

The major objectives of all three radio programs were to orient visitors to Mount Revelstoke/Glacier National Parks, the Columbia Mountains and to Rogers Pass Centre. In addition a major objective was to attract visitors to tuning into the broadcasts.

Objectives	Target	Result	Knowledge Gain
People who enter the Park in a vehicle equipped with a radio:			
will attempt to receive one radio program.	30%	29% + 3%	N/A
(Percent able to receive the program).		18% + 3%	
People who listened to the radio program:			
will know they are in Mt. Revelstoke or Glacier National Park.	90%	86% + 7%	21%
will know they are in the Columbia Mountains.	70%	59% + 12%	21%
will know they can obtain further information concerning the park at Rogers Pass Centre.	70%	67% + 11%	29%
will visit Rogers Pass Centre as a result of listening to the LPRT.	60%	32% + 14%	N/A
During special goat warning conditions people will know there is a potential hazard.	70%	special conditions did not apply - no results available.	

The knowledge gains for these objectives are significant.

Discussion

The results show that the target of 30% of Park visitors trying to receive the broadcast is being achieved. However only 17-21% of visitors were able to receive the transmission. During this evaluation the LPRTs were in operation 95% of the time. This indicates there were other problems than technical malfunctions.

From visitors comments it appears that most visitors do not understand that the radio programs are broadcast only over a short range. Visitors would state they were unable to hear it, there was too much static or that it would fade out. If they tried to pick up the broadcast at the edge of the range it would be either difficult to hear or there would be a lot of static. The transmission would also fade out at the limit. Between the transmissions the visitor would hear only static. From these comments visitors appear to be trying to receive the broadcast at the limit or outside of the broadcast range.

The Park has stated that the Information Radio signs are placed outside the broadcast range to allow visitors time to tune in. The signs appear to be too far outside the range.

In addition the long version of the tape is too long for the existing LPRT range. When the vehicle is travelling at the speed limit, the program cannot be heard once completely because the range is too short. This may further confuse visitors about the range of the broadcast.

A technical evaluation of these LPRTs has been carried out and has indicated that the range could be increased substantially. This would greatly assist in preventing visitor confusion by allowing the tape to play through at least once.

All of the overall objectives meet their target percentage and the knowledge gains for all are significant. No objective has been set for the knowledge gain so the gain cannot be classified as successful or unsuccessful.

Certainly visitors are learning and retaining information from the program. For one objective - visitors knowing they are in the Columbia Mountains - there was some confusion. Many visitors knew they were in the Selkirks (which was considered correct) but occasionally stated the Selkirks were in the Rockies. This indicates that visitors overall may think the Selkirks are part of the Rockies, or that Selkirks is the name of the whole mountain range. From the responses it is difficult to actually determine if visitors know that the Selkirks are part of the Columbia Mountains. The program did not mention the Selkirks at all so that information is coming from another source. It is possible that some clarification of the mountain ranges is required.

3.2 EAST GATE LPRT

The East Gate LPRT operates from the East Gate of Glacier National Park. A sign located approximately 1.5 km. east of the gate notifies visitors of the broadcast. In addition to the overall messages this tranmission also provides information on the availability and location of camping and picnic facilities, distinctive features of the Columbia Mountains, information on Rogers Pass Centre and the location of the next LPRT.

Objectives	Target	Result	Knowledge Gain
People who listened to the East Gate program:			
will know there are camping and picnic facilities available in the Park.	70%	74%±13%	12%*
will know at least one distinctive feature of the Columbia Mountains.	70%	39%±14%	31%
will know there are exhibits and an indoor theatre at Rogers Pass Centre.	70%	32%±14%	15%
will know there is a Park Naturalist on duty at Rogers Pass Centre.	70%	52%±15%	32%
will know that there is another LPRT in the Park.	60%	42%±16%	31%
will know the nearest picnic facilities are located 1 km to the east.	40%	32%±14%	14%
will know Giant Cedars Picnic Area is located in Mount Revelstoke National Park.	40%	19%±12%	6%*
will know that the campgrounds are open/closed.	40%	94%±10%	20%

* Knowledge gain is not significant - there is no statistical evidence that visitors gained by knowledge from this broadcast.

People who listen to the summer special condition program:

will know mountain goats are on the highway and in the snowsheds.	70%	no data available - special conditions did not apply.
will know they must drive carefully.	70%	
will know they should not stop in an unsafe area if they see a goat.	70%	

Discussion

Many of the problems shown by this radio program are also found in the other two programs. These problems will be discussed here in detail and referred to in further discussion. Only specific problems of the other two broadcasts will be discussed in further sections.

The target has been achieved for the objectives regarding camping and picnic facilities. However most people knew there were picnic and camping facilities available before they heard the broadcast, as the gain is not significant. In addition, visitors knew campgrounds were open or closed before they listened to the program.

This indicates that providing the information that camping and picnic facilities are available and that campgrounds are open is redundant in the peak summer season (when this survey was conducted). During the fall and spring season campground information may be more important.

Visitors do not appear to be retaining information about mountain features, about Rogers Pass Centre, or about Giant Cedars Picnic Area. This may be due to a number of factors - the short range of the broadcast, too much information in a short program, and even the wording of the script. In order to improve the program the following improvements are suggested:

1. Increase the broadcast range.

   This would allow the broadcast to be received and heard over a greater distance. Visitors would then be able to hear the complete program.

2. Reduce the number of messages to be presented.

   Currently the tape attempts to present too many messages. By presenting fewer mesages and clarifying them the programs will be more successful.

3. Identify critical messages.

   The present programs do not highlight major or important messages. Each message is treated equally. In order to ensure that major messages are picked up by visitors they should be highlighted or perhaps repeated.

4. Produce broadcast quality programs.

   New programs should be produced. Quality scripts should be encouraged which reflect points two and three. The programs need to be clear, easily understood, motivating and should meet broadcast standards. If this is accomplished there will be a greater chance of increasing visitor use of the LPRT.

3.3 ROGERS PASS LPRT

This transmission is located at Rogers Pass 1 km. east of the summit. Road signs about 1 km. east and west of the Pass, inform visitors of the LPRT. In addition to the major overall objectives, this program includes information on Rogers Pass, the first railway, Rogers Pass Centre and where a free guide to the Pass is available.

Objectives	Target	Result	Knowledge Gain
Of the people who listened to the Rogers Pass radio program			
will know they are at Rogers Pass.	80%	87%±12%	13%*
will know Rogers Pass is in Glacier National Park.	80%	93%± 8%	20%
will know that the first railway was defeated by avalanches.	70%	63%±15%	40%
will know there are exhibits and an indoor theatre at Rogers Pass Centre.	70%	58%±18%	45%
will know there is a Park Naturalist on duty at Rogers Pass Centre.	70%	58%±16%	44%
will know Rogers Pass is the only transportation route across the Central Columbia Mountains.	60%	67%±15%	15%*
will know a free guide to Rogers Pass is available at the Rogers Pass Centre or any Park office.	50%	70%± 7%	36%
People who listen to programs #1, 4 and 6:			
will know they must register for climbing and hiking at the Administration Building.	10%	No results as conditions for these tapes did not apply and tapes were not played.	

* knowledge gain not significant

People who listen to tape #3:

will know naturalists are leading hikes into the backcountry.	40%	
will know the hikes start at 10:00 A.M.	40%	
will know the hikes are 4-5 hours long.	40%	
will know the hikes start in Illecillewaet Campground.	40%	No data as conditions did not apply and tape was not played.

People who listen to tape #3:

will know mountain goats are on the highway and in the snowsheds.	70%
will know they must drive carefully.	70%
will know they should not stop in an unsafe area if they see a goat.	70%

Discussion

The results for those objectives for which data has been collected indicate that the targets have been achieved. This implies that this tape is quite successful. A closer examination indicates that 4 of 7 objectives have relatively high knowledge gains. For two it appears that visitors already know the information before hearing the tape. They know that they are at Rogers Pass and that it is the only transportation route across the Columbia Mountains. This indicates these messages are redundant and, thus, need not be included.

The visitors surveyed for these results were at Rogers Pass Centre, at the gas station or at Illecillewaet Campground. At the Centre and the gas station visitors were able to stop within range of the LPRT and, therefore, they were able to listen to it until they had heard it completely.

Although there are quite a few messages for this tape the program is generally successful because visitors are able to stop and listen to the tape for as long as they wish. In this

way they are able to pick up information they feel is important.

To enhance the success of this program critical information should be repeated in the prcgram and the script and program should be of sufficient quality to enable visitors to retain most of the messages the first time they hear the program.

3.4 WEST GATE LPRT

This LPRT operates at the West Gate of Mount Revelstoke National Park. A sign about 1 km. to the west of the gate informs visitors of the transmission. This program, in addition to the overall messages, provides information on distinctive features of the Columbia Mountains, about Rogers Pass Centre, facilities in Mt. Revelstoke National Park and the location of the next LPRT.

Objectives	Target	Result	Knowledge Gain
People who listen to the West Gate radio program			
will know at least one feature of the Columbia Mountains.	70%	18%±19%	3%*
will know there are exhibits and an indoor theatre at Rogers Pass Centre.	70%	73%±22%	52%
will know there is Park Naturalist on duty at Rogers Pass Centre.	70%	91%±14%	56%
will know there is another program at Rogers Pass.	60%	18%±19%	5%*
will know there are no campgrounds in Mt. Revelstoke National Park.	40%	36%±24%	8%*
will know there are picnic sites in the Park.	40%	73%±22%	17%*
will know there is a boardwalk through the rainforest at Giant Cedars and Skunk Cabbage Picnic Area.	40%	64%±24%	21%*
will know the road to the summit of Mt. Revelstoke is open/open partway.	40%	36%±24%	19%*

* Knowledge gain is not significant.

Discussion

Most of these objectives appear to reach the target successfully. However, there were few visitors to the sites

sampled during the collection period so the sample size is extremely small. Therefore the confidence limits are extremely large. Because of this, these results should be viewed with caution.

Visitors were not retaining the messages about features of the mountains or about transmissions in the Park. They are successfuly picking up information about Rogers Pass Centre, however. As mentioned for the East Gate LPRT, there are too many messages contained in a short transmission. By improving the broadcast range and the quality of the program (as suggested for the East Gate LPRT, pg. 15) visitor retention of information could be improved.

3.5 BEHAVIOURAL OBJECTIVES

In addition to the knowledge objectives there were also expectations on the way visitors would react to the signs and the transmission.

Objectives	Target	Result
People entering the Park		
will see the Information Radio sign.	50%	73% ± 5%
People who see the sign		
will understand the program provides information on the Park, the campground and facilities.	35%	19% ± 7%
People entering the Park in a vehicle equipped with a radio		
will attempt to receive two broadcasts.	25%	13% ± 4%
will listen to both complete programs.	20%	8% ± 3%
People receiving a program in the Park		
will stop in the Park.	60%	57% ± 31%
intend to use Park facilities.	60%	57% ± 31%
will be repeat visitors.	20%	35% ± 15%
People who listen to Rogers Pass LPRT program		
will visit Rogers Pass Centre.	70%	52% ± 18%
People who listen to the East Gate and West Gate radio program		
will visit Skunk Cabbage and/or Giant Cedars.	30%	No data
People who listen to the West Gate radio program #3, 4, and East Gate radio program #3,4.		
will stop at the campground.	10%	No data

Discussion

These results show that 73% of the people entering the Park saw the sign but only 19% understood what information the program has to offer. In addition few attempted to hear two transmissions and, from visitor comments, few understood that the transmissions are different.

Together with the percentage of visitors who attempt to listen to the program (29%), the data indicates that visitors are uncertain as to what the radio service has to offer and that the broadcast is only short range. Both Wylie (1980) and Mowat (1981) state that advertising is essential to inform the audience that the program exists. By improving visitors' understanding about the operation and content of the programs more people would tune in to the broadcast.

The target for objectives of people stopping in the Park (60%) and people stopping at the Centre (70%) are not consistant. More people will stop throughout the Park (including the Centre, the campgrounds and picnic sites) than people who stop only at the Centre. Therefore these targets should be reassessed.

The sample size was so small for people receiving the program that the confidence limit is extremely large. Because of this no conclusions can be drawn.

3.6 AFFECTIVE OBJECTIVES

The visitors' perception of the usefulness, content and information of the program were determined as well as the type of information visitors would like to hear on the radio program.

Objectives	Target	Result
People who listen to the radio program:		
will find it useful.	60%	95% ± 6%
will find the information easy to understand.	80%	80% ± 11%
will find the content sufficient.	80%	79% ± 11%
will find the radio program interesting.	80%	94% ± 11%
People who enter the Park:		
will want to hear information on the Park's historic features.	80%	12% ± 8%
will want to hear information on the Park's natural features.	80%	22% ± 6%
will want to hear information on the Park's facilities and services.	60%	42% ± 6%

Discussion

Overall the visitors who are able to receive and listen to the programs are satisfied with the service it provides. A few mentioned they would be interested in hearing more information especially on the Park natural history. Some stated that the broadcast was full of static, but they were able to receive it. This may be due to the quality of the vehicle radio receiver.

People wanted to hear information on emergencies and road conditions (24%) and on the weather (42%) as well as on the Park facilities and services and on natural and cultural history. During the survey period the weather was extremely inclement, raining and cold most days. Also visitors were concerned about emergencies and road conditions because of the mudslides and the washout of Wolsey Creek Bridge in July. As a result visitors may have been concerned

about this information more than they would be normally.

In addition, although visitors may want to know about services and facilities, they may want information that cannot be easily provided at present, ie. campgrounds full, trails open or closed etc. The program can inform visitors where they can find this information however, and what campgrounds there are in the Parks.

Overall visitors found the program content to be sufficient, therefore the content reflects most of the information visitors want to hear.

3.7 DEMOGRAPHIC ASSUMPTIONS

Assumptions were made about the visitors to the Park when the LPRT was first set up. These include the percent of vehicles with radios, the percent of repeat visitors, the percent of families with children under 16 and visitors reactions to programs in other parks.

Assumptions	Expectation	Result
People entering the Park:		
had predetermined Mt. Revelstoke/Glacier National Park as a destination/stopping point.	10%	6% ± 1%
are repeat traffic.	70%	54% ± 7%
are family units with children under 16.	50%	29% ± 5%
in the private vehicles have radios with AM frequency reception.	90%	94% ± 2%
(FM reception) -		(56% ± 7%)
will have attempted to receive another Canadian National Park radio program at least once.	25%	40% ± 5%
People who attempted to receive a program in a Canadian National Park:		
will have listened to the entire transmission.	25%	72% ± 14%
People who visit National Parks:		
will attempt to receive the program on every visit.	5%	2% + 8%

Discussion

Some of the demographic results were lower than the assumptions - fewer visitors had predetermined Mt. Rev./Glacier N.P. as a stopping point, there was less repeat traffic than expected and fewer family units with children under 16. This data would likely change depending on the time of year as there are probably more repeat visitors in the fall, spring or winter than in the summer.

The number of repeat visitors may affect the content of the program and the frequency of changing the script. Most people don't plan to stop so the radio program will be important in providing these people with background information on the Park and in drawing people to make use of facilities and services. The program does draw visitors in to the Centre (32% entered the Centre because they heard the program). In addition while there are few children under 16, these young people should not be ignored.

In general visitors have tried to receive other programs and were able to hear them. But few listen on every visit, indicating that the programs weren't encouraging them to tune in again. This could be due to either quality or the information being broadcast.

When new scripts are being written this data should be carefully considered.

TECHNICAL ASSUMPTIONS

In order to set up LPRT operation certain assumptions about the equipment and its operation were made.

Assumptions	Result
The unit will broadcast clearly and understandably over a range of 2.4 km. 99% of the time.	95% of the time
Original quality tapes can be produced within two weeks by the Park and copies made within two weeks.	not possible at present in the Park
Information signage related to the LPRT will be visible and up to date 100% of the time.	95% of the time
95% of the LPRT malfunctions will be rectified within 5 minutes.	down time-2-3 hours
The appropriate message for the conditions, as defined by Park naturalists, will be broadcasting 100% of the time.	during the survey this was accomplished

Discussion

The range of the broadcast is about 2 to 2.5 kilometres but, for a visitor driving through at 50 km/hr. (through the Gates), this means a tape can be heard for only about 90 seconds. In comparison the short tapes are 55-80 seconds long and the long tapes are 90 to 130 seconds long.

At Rogers Pass, where the speed is 70 km/hr., the tape informs people about the Centre and was designed to be heard before reaching the Centre. This only allows the tape to be one minute long. The amount of information in the program is too much for that short a broadcast. Either the number of messages presented should be reduced or the broadcast range should be increased.

In addition, malfunctions were not quickly fixed and, therefore, the down time was greater than expected. Frequently Visitor Services personnel did not know there was a malfunction as they were not aurally monitoring the tape. By installing a simple warning system at manned sites the A.V. Media Specialist feels this downtime could be greatly reduced.

At present it is not possible to produce tapes in the Park. However excellent quality tapes can be produced in WRO within two weeks and copies made within one week. Emergency copies could be produced within 24 hours. The A.V. Media Specialist also feels that with some training and good equipment, Park personnel would be able to produce tapes in case of emergencies.

Information signage was not easily changed during this survey as a "closed" sign had been nailed across the notifying Information Radio sign and the sign was too high to be easily removed. The usual system of hanging the closed sign on hooks below the sign is easier to change.

The LPRT Technical Evaluation has provided valuable information on the potential of the LPRT. Implementing these suggestions would be the first step in improving the operation of this system.

TAPE COMPARISONS

For low powered radio the program length is specified by the range of the transmission. Due to the number of messages to be included in this program the first tapes made in WRO by the A.V. Media Specialist, although clear, easy to understand and of high quality, were too long for the LPRT range. Another set of tapes were made that were short enough but the recording was quite fast and possibly confusing. A comparison of the tapes was made to determine if there was any difference in knowledge retention. Comparisons were made for only the Rogers Pass program.

Objectives	Results	
People who listen to the Rogers Pass program	Short	Long
will know they are at Rogers Pass	82%	88%
	no significant difference	
will know Rogers Pass is in Glacier National Park	93%	92%
	no significant difference	
will know the first railway was defeated by avalanches	73%	50%
	no significant difference	
will know there are exhibits and an indoor theatre at Rogers Pass Centre	50%	45%
	no significant difference	
will know there is a Park Naturalist on duty at Rogers Pass Centre	67%	45%
	no significant difference	
will know Rogers Pass is the only transportation route across the Central Columbia Mountains	73%	58%
	no significant difference	
will know a free guide to Rogers Pass is available at the Rogers pass Centre or any Park office.	73%	67%
	no significant difference	

Discussion

The results here show no appreciable difference between the two tape versions. The short version has a slightly higher result possibly because the short tape can be heard about 1½ times throughout the broadcast range while the long version cannot be completely heard once. Since high quality tapes are preferred, it means that the number of messages must be reduced in order to produce more aesthetic tapes. It is expected that, with fewer messages and higher quality scripts and programs, the effectiveness of the program in presenting information will be significantly improved.

VISITORS COMMENTS - A RANDOM SAMPLE

These are some of the comments and responses visitors gave to questions asked on the mailback questionnaires.

Question:
'What kind of information would you like to hear on a Parks Canada Radio Transmission?'

Responses:
"At what (point) could one start picking up the radio signal".

"Improve strength on radio station after having listened to it".

"Weather, geological & historical information on park; trails-hiking & skiing, campsites - wildlife; bear situation; when is the broadcast on & station (frequency)".

"Condition of Park roads, places to stop & things to see. Mix with good country music".

"Information about the National Park in different languages, for example; German or French".

"Weather - poor reception in our car - OK through Rogers Pass".

"You are quite thorough in your information".

"We would like simply to be able to tune into it. It is awfully fuzzy".

"More about the flora & fauna, please. I think a Canadian voice should do the broadcast".

Question:
'Did you listen to the Parks Canada radio transmission?"

Responses:
"No. Could not find it on radio, only static".

"Signal is too weak and often difficult to receive".

"Have often tuned into Parks Radio but never received transmission".

"Unable to hear broadcast clearly until right at the summit".

"The reception was insufficiently clear for understanding".

"Couldn't get very good reception, too short a broadcast. Nice background music - neat idea".

"It was in Japanese (in) Banff Park".

4.0 DISCUSSION AND CONCLUSIONS

The results point out that there are a number of strengths and weaknesses with the low powered radio system.

4.1 Advertising

One of the major problems with Low Powered Radio is that visitors do not understand what the program offers or how it operates. At present advertising of the system is limited in Mt. Revelstoke/Glacier National Park to a small paragraph in one of the brochures and to the Information Radio signs. These are both very limited in their explanation of the short range of the radio broadcast and what information it provides. By improving this information more visitors would know what the service has to offer and would be more likely to tune in.

At present the Park has placed the LPRT sign just beyond the limit of the broadcast. This results in problems when visitors try to tune in because at first they hear only static and may turn it off. Increasing the broadcast range and placing the sign at the beginning of the range would allow visitors to tune in easier.

In addition, advertising in the brochure should be more explanatory to clearly outline what the service is and how it works. Advertising in other media throughout the region, such as newspapers and on radio, would improve visitors' use of low powered radio throughout all the park. Both Wylie (1981) and Mowat (1982) recommend several methods of advertising including mention in all park literature, several signs, producing radio schedules if different programs are offered throughout the day, and article and local radio advertising. For visitors to be able to use the system they must know it's there, and how to receive it.

4.2 Visitor Use

About 29% of the visitors to the Park tried to receive the lower powered radio system. This certainly meets the target and means that, if all visitors who attempt to tune in are able to receive the broadcast, the program would be received by about 1900 vehicles per day or about 5,000 visitors (2.8 visitors per vehicle). The programs therefore have the potential of reaching a large number of Park visitors. At present they reach about 1100 vehicles or 3100 people per day.

4.3 Visitor Knowledge

In this evaluation we were concerned with visitor retention of the LPRT program messages. The overall messages were successfully remembered by most visitors but some of the site specific messages (East Gate and West Gate especially) were not retained. The messages at Rogers Pass did meet the target because people were interviewed while they were at the Pass or the campsite. These people were able to stop and listen to the program as often as they wished. However people at the Gates usually continued driving and were, therefore, only able to hear the tape once.

A number of factors may affect visitor information retention. These include the short range of the broadcast, too much information in a short program, and even the wording of the script and the quality of the program. In order to improve the program the following improvements are suggested.

1. Increase the broadcast range
2. Reduce the number of messages to be presented
3. Identify critical messages
4. Produce broadcast quality programs

4.4 Visitor Requirements

In their responses visitors to the Park clearly indicated they would like to hear information on the cultural and natural history and on Park facilities and services. Their major interest concerned activities and facilities available in the Park. Interest in road conditions and weather was also expressed, however this may have been influenced by poor weather and the closing of the highway during this summer.

Visitors who did listen to the broadcast found it interesting, easy to understand and sufficient. The program as it is appears to reflect visitor expectations and requirements.

4.5 Visitor Behaviour and Characteristics

It is difficult to determine how the program affects visitor behaviour although it does seem to attract visitors to some facilities such as Rogers Pass Centre and Giant Cedars. A few visitors to these sites did comment that they had come because

they heard about it on the broadcast. Because it reaches such a large number of visitors it is at least providing them with the information and, possibly, influencing them on returning to visit. Better tapes would likely increase any positive influence.

The characteristics of visitors were slightly different than expected and future messages and scripts should reflect this, e.g. the percent of return visitors.

4.6 Tape Production, Length and Quality

As mentioned previously the broadcast range is the limiting factor in determining the program length. From the results shown here critical messages should be heard twice in the program and the writing and program quality should be high to enable the messages to be heard clearly, easily understood and to encourage visitors to tune in again. Ideally, visitors should hear the tape from 1¼ to 2 times.

At present the number of messages being presented per program is quite high. The present technical evaluation of the LPRT has determined the range possible with the present equipment. Using this range the objectives should be reassessed, and a professional quality script written. For further discussion see pg. 32, 4.3 Visitor Knowledge.

The A.V. Media Specialist has set up equipment for producing professional quality tapes within two weeks. At present the Park does not have the capability to produce tapes but the A.V. Media Specialist feels that, with some training with adequate equipment, tapes could be produced in the Park, but for emergency situations only.

4.7 Technical Aspects

A technical evaluation of the present equipment in Mt. Revelstoke/Glacier National Park has been completed and, therefore, this report will not discuss technical aspects in great detail. For further information see the report on the LPRT Technical Evaluation Project, 1983.

At present there is some problem with the broadcast range because it is only 2 km long. A longer range would allow critical messages to be heard twice and, also, reduce confusion regarding reception of the program. The technical evaluation has determined this is possible.

A major requirement for the LPRT's is the installation of a warning system that indicates when the equipment malfunctions. This would allow the equipment to be repaired quickly, or, at least, shut down. Some dedication of maintenance and tape checking time should be made to ensure that the equipment is constantly functioning at peak efficiency, and broadcasting the correct information.

The East Gate is not manned during the summer. This presents a problem when tapes have to be changed or when the equipment malfunctions. The A.V. Media specialist states that 'automatic long-distance signalling devices are not economically feasible at this time'. In that respect some thought must be given as to the future of the LPRT at the East Gate.

4.8 Conclusion

At present there are some problems with Low Powered Radio, such as too many messages, lack of visitor understanding of the information available on the programs and the range of the present equipment. However, low powered radio is able to reach large numbers of Park visitors, is low cost and can be easily maintained. Once these problems are eliminated, the radio programs can be a highly effective information system.

4.9 Regional LPRT Operations

Visitors tend to see the four mountain parks and Mt. Revelstoke/Glacier National Park as one whole system, not separate. Therefore problems which occur in one park may affect the visitors' behaviour in another park. This is especially true of low powered radio since many visitors enter Banff and go through Rogers Pass the same day and vice versa, so any impression generated by the program in Banff easily carries over into Mt. Revelstoke/Glacier National Park and vice versa. If other LPRTs are not operating, if the quality is poor or if the messages are not of interest to the visitor then there may be no attempt to listen in other parks. Conversely a lively, interesting program will entice visitors to listen as often as possible. Each park must recognize this responsibility and strive to maintain LPRT operation and high quality of program content if the system is to be successful. A regionally co-ordinated implementation strategy, via the A.V. Media Specialist, should set quality guidelines and responsibilities.

5.0 RECOMMENDATIONS

5.1 Short Term

These recommendations are for the equipment as it exists.

1. The recommendations of the LPRT Technical Evaluation (1983) should be implemented as soon as possible to improve the range and operation of the LPRT.

2. Ensure that Park staff obtain training in the operation and maintenance of low powered radio system.

3. Reassess the messages of the program and write and produce new programs, in co-ordination with the WRO A.V. unit. Ensure that the programs meet professional broadcast standards, and that messages are delivered clearly, critical messages being repeated as necessary within the program.

4. Install a simple warning system in manned sites to inform personnel when equipment is malfunctioning.

5. Place the Information Radio sign where a reliable, listenable signal can be received by an A.M. receiver.

5.2 Intermediate/Long Term

1. Advertise, within the Park brochures, the program services available and what the programs offer.

2. Develop, via the A.V. Media Specialist, a regional low powered radio implementation strategy which outlines the Park responsibilities in LPRT operation, and a regional advertising strategy. This advertising should clearly outline the function and content of low powered radio programs.

3. Determine the feasibility of installing automatic shutdowns on all LPRTs in case of malfunctions and of installing warning systems on unmanned sites.

4. Ensure that A.V. unit personnel test technical equipment operation yearly and make changes as required to provide the most efficient service.

5.3 Planning for Other LPRT Operations

1. Carry out a site test/feasibility study of all future LPRT sites as the first step in implementation.

2. Ensure that all programs produced are of professional broadcast quality and professionally written.

3. Incorporate a warning system/automatic shutdown in manned LPRT sites.

4. Determine the feasibility of a warning system/automatic shutdown for unmanned sites.

6.0 REFERENCES:

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7.1 APPENDIX A

TAPE SCRIPTS

L.P.R.T. Script

East Gate #4

Condition of use: Tourist Season, Glacier camping open, gate not manned.

55 Seconds

You are driving through Glacier National Park.

The mountains are called the Columbia Mountains.

You can see features of the Columbias as you drive through the parks:

- angular mountains often rise more than two thousand meters above the narrow valley bottoms.
- many treeless avalanche paths plunge down the mountain sides.
- large cedar and hemlock trees line the highway and indicate a mild, moist climate.

There are three campgrounds and several picnic areas and viewpoints open in the park. The closest picnic area can be found by backtracking 1 km from the Gatehouse.

Washrooms for the handicapped are available at the next viewpoint ahead on the right side of the highway.

A visitor centre and museum, the Rogers Pass Centre is located 17 km ahead on the Trans-Canada Highway, near the summit of Rogers Pass. The Centre features a theatre, exhibits, and an information desk. A park Naturalist is on duty to answer any questions on the parks human and natural history.

L.P.R.T. Script #3

A visitor centre, the Rogers Pass Centre is 51 km ahead, near the summit of Rogers Pass. The Centre features a theatre, exhibits, and an information desk. A park naturalist is on duty to answer any questions on the parks human and natural history.

For more information ask the gateway attendant or staff at the Rogers Pass Centre. The next information radio station is at Rogers Pass.

L.P.R.T. Script

East Gate #6

Condition of use: Tourist Season, camping, gate manned, Goat warning.

You are driving through Glacier National Park.

The mountains are called the Columbia Mountains.

At this time of the year mountain goats are often on the highway and in the snowsheds. This presents an extreme danger to the goats and to you. Please drive very carefully through the snowshed area located 11 km ahead. Do not stop in an unsafe area if you do see a goat.

You can see wildlife anywhere in the park. Watch closely and drive carefully. Both animals and people have been killed here by highway accidents.

There are three campgrounds open in the park. Ask the gate attendant for directions. Several picnic areas and viewpoints are also open. The closest picnic area can be found by backtracking 1 km from the Gatehouse.

A visitor centre, the Rogers Pass Centre, is located 17 km ahead on the Trans-Canada Highway, near the summit of Rogers Pass. The Centre features a theatre, exhibits, and an information desk. A park Naturalist is on duty during public hours to answer any questions on the park's human and natural history.

For more information ask the staff at the Rogers Pass Centre. The next information radio station is 16 km ahead in Rogers Pass.

L.P.R.T. Script

West Gate #3

Conditions of use: Tourist Season, Glacier camping open, Mount Revelstoke Road open to summit, gate manned. 80 Seconds.

You are entering Mount Revelstoke National Park.

The mountains are called the Columbia Mountains. You can see features of the Columbia Mountains as you drive through the parks:

- angular mountains often rise more than two thousand meters above the narrow valley bottoms.
- many treeless avalanche paths plunge down the mountain sides.
- large cedar and hemlock trees line the highway and indicate a mild, moist climate.

There are no campgrounds in this park. However several campgrounds are open in Glacier National Park. For riverside picnicking we recommend Skunk Cabbage picnic area, 9 km ahead on the right. Skunk Cabbage offers a short nature trail through the Skunk Cabbage wetlands. Washrooms for the handicapped are available at Giant Cedars Picnic Area, 11 km ahead on the left, Giant Cedars also offers a short boardwalk through a rainforest. Note that left turns are not allowed at Giant Cedars and you must proceed past the picnic area to find a safe turn-around.

The road to the summit of Mount Revelstoke is located 18 km west of here on the Trans-Canada. It is currently open to the summit. There are scenic viewpoints and picnic areas along the summit road.

East Gate #4

For more information listen to the next information radio station 16 km ahead in Rogers Pass.

L.P.R.T. Script

West Gate #4

Conditions of use: Tourist Season, Glacier camping open, Mt. Revelstoke open part way, gate manned.

You are entering Mount Revelstoke National Park.

The mountains are called the Columbia Mountains.

You can see features of the Columbias as you drive through the parks:

- angular mountains often rise more than two thousand metres above the narrow valley bottoms.
- many treeless avalanche paths plunge down the mountain sides.
- large cedar and hemlock trees line the highway and indicate a mild, moist climate.

There are no campgrounds in this park. Several campgrounds are open in Glacier National Park.

For riverside picnicking we recommend Skunk Cabbage Picnic Area 9 km. ahead on the right. Skunk Cabbage offers a short nature trail through the Skunk Cabbage wetlands. Washrooms for the handicapped are available at Giant Cedars Picnic Area, 11 km ahead on the left. Giant Cedars also offers a short boardwalk through the rainforest. Note that left turns are not allowed at Giant Cedars and you must drive past the picnic area to find a safe turn-around.

The road to the summit of Mount Revelstoke is located 18 km. west of here on the Trans-Canada. It is not open to the summit now, but you can drive up part way. There are scenic viewpoints and picnic areas along the summit road.

A visitor centre, the Rogers Pass Centre is 51 km. ahead near the summit of Rogers Pass. The centre features a theatre, exhibits, and an information desk.

A park naturalist is on duty to answer any questions on the parks human and natural history.

For more information ask the gateway attendant or staff at the Rogers Pass Centre. The next information radio station is at Rogers Pass.

L.P.R.T. Script

Rogers Pass #1

Conditions of use: Tourist Season, RPC closed, no naturalist programme. 55 seconds.

You are driving over Rogers Pass in Glacier National Park.

The highest point on the highway is 1330 metres above sea-level.

Rogers Pass is the only feasible transportation route across the central Columbia Mountains.

Canada's first transcontinental railway was built over the pass in 1885. However, snow avalanches defeated the Canadian Pacific Railway after much loss of life. In 1916, the railway retreated into an 8 km. tunnel under Rogers Pass.

This highway was opened in 1962 and man's battle with avalanches resumed. There are numerous historical points of interest and trails in this area. A free guide to Rogers Pass called Snow War is available at the Rogers Pass Centre.

A visitor Centre, the Rogers Pass Centre is located just ahead of the Trans-Canada Highway, watch for a highway directional sign. The Centre features a theatre, exhibits and an information desk. A park naturalist is on duty during public hours to answer any questions on the park's human and natural history.

The Rogers Pass Centre is closed for the day. If you require more information, the Glacier Administration Office is open. It is located directly across the highway from the Rogers Pass Centre. Follow the service road to the first brick building. The office is upstairs. All climbing and hiking registrations for the park are made here.

L.P.R.T. Script

Rogers Pass #3

Conditions of use: Tourist Season, RPC open, naturalist programme operational. 50 Seconds.

You are driving over Rogers Pass in Glacier National Park.

The highest point on the highway is 1330 metres above sea-level. Rogers Pass is the only feasible transportation route across the central Columbia Mountains.

Canada's first transcontinental railway was built over the pass in 1885. However, snow avalanches defeated the Canadian Pacific Railway after much loss of life. In 1916, the railway retreated into an 8 km. tunnel under Rogers Pass.

This highway was opened in 1962 and man's battle with avalanches resumed. There are numerous historical points of interest and trails in this area. A free guide to Rogers Pass called Snow War is available at the Rogers Pass Centre.

Park naturalists often lead conducted hikes into the park's backcountry to look at the outstanding natural and historical features of this area. You are welcome to come along. The hikes start at 10:00 a.m. Pacific Daylight Time, and last for four to five hours. To find out if a hike is being offered today, ask the attendants at the Rogers Pass Centre.

Look for the sign on the highway. The Centre features a theatre, exhibits, and an information desk. A park naturalist is on duty to answer any questions on the park's human and natural history. For more information ask the attendants at the Rogers Pass Centre.

L.P.R.T. Script

Rogers Pass #2

Conditions of use: Tourist Season, RPC open, no naturalist programme. 55 Seconds.

You are driving over Rogers Pass in Glacier National Park.

The highest point on the highway is 1330 metres above sea-level. Rogers Pass is the only feasible transportation route across the central Columbia Mountains.

Canada's first transcontinental railway was built over the pass in 1885. However, snow avalanches defeated the Canadian Pacific Railway after much loss of life. In 1916, the railway retreated into an 8 km. tunnel under Rogers Pass.

This highway was opened in 1962 and man's battle with avalanches resumed. There are numerous historical points of interest and trails in this area. A free guide to Rogers Pass called Snow War is available at the Rogers Pass Centre.

A visitor centre, the Rogers Pass Centre is located just ahead and is currently open. The Centre features an indoor theatre, an exhibit hall, and an information desk.

A Park naturalist is on duty to answer any questions on the parks human and natural history. For more information ask the attendants at the Rogers Pass Centre.

L.P.R.T. Script

Rogers Pass #4

Conditions of use: Tourist Season, RPC closed, goat warning. 50 seconds approx.

You are driving over Rogers Pass in Glacier National Park.

The highest point on the highway is 1330 metres above sea-level. Rogers Pass is the only feasible transportation route across the central Columbia Mountains.

Canada's first transcontinental railway was built over the pass in 1885. However, snow avalanches defeated the Canadian Pacific Railway after much loss of life. In 1916, the railway retreated into an 8 km. tunnel under Rogers Pass.

This highway was opened in 1962 and man's battle with avalanches resumed. There are numerous historical points of interest and trails in this area. A free guide to Rogers Pass called Snow War is available at the Rogers Pass Centre.

You can see wildlife anywhere in the park. Watch closely and drive carefully. Both animals and people have been killed here by highway accidents.

A visitor centre, the Rogers Pass Centre is located just ahead. The Centre features a theatre, exhibits, and an information desk. A park naturalist is on duty during public hours to answer any questions on the park's human and cultural history.

For more information ask the attendants at the Rogers Pass Centre.

7.2 APPENDIX B

DATA COLLECTION SCHEDULE

MOUNT REVELSTOKE/GLACIER NATIONAL PARK - LPRT EVALUATION

TIME	JULY 04 MONDAY	05 TUESDAY	06 WEDNESDAY	07 THURSDAY	08 FRIDAY	09 SATURDAY	10 SUNDAY	11 MONDAY
0900						GIANT CEDARS		ROGERS PASS GA
1100						PICNIC AREA-E		STATION - C
1100			ROGERS PASS GAS	SKUNK CABBAGE			ROGERS PASS GAS	
1300			STATION - F	PICNIC AREA-A			STATION-B	
1300				ROGERS PASS GAS				ROGERS PASS
1500				STATION - A				CENTRE - C
1500			ROGERS PASS			ILLECILLEWAET	LOOKOUT AREA	
1700			CENTRE - E			CAMPGROUND - A	#2 - B	

MOUNT REVELSTOKE/GLACIER NATIONAL PARK - LPRT EVALUATION

TIME	AUGUST 22 MONDAY	23 TUESDAY	24 WEDNESDAY	25 THURSDAY	26 FRIDAY	27 SATURDAY	28 SUNDAY
0900 1100				ROGERS PASS GAS STATION - E		HANDOUT QUESTIONNAIRE-A - WESTGATE	ROGERS PASS CENTRE - E
1100 1300		GIANT CEDARS SECTION - A	ROGERS PASS CENTRE - B	ROGERS PASS CENTRE - F			
1300 1500				HANDOUT QUEST. A - EASTGATE			GIANT CEDARS PICNIC AREA-D
1500 1700			LOOKOUT 1 B	ILLECILLEWAET CAMPGROUND - E			HANDOUT QUESTIONNAIRE D - WESTGATE
0900 1100				ROGERS PASS CENTRE - C			ROGERS PASS GAS STATION - F
1100 1300		SKUNK CABBAGE SECTION - D	ROGERS PASS GAS STATION-B				
1300 1500				ROGERS PASS CENTRE - A			SKUNK CABBAGE PICNIC AREA - E
1500 1700			ILLECILLEWAET CAMPGROUND - C				

MOUNT REVELSTOKE/GLACIER NATIONAL PARK - LPRT EVALUATION

TIME	AUGUST 29 MONDAY	30 TUESDAY	31 WEDNESDAY	THURSDAY	FRIDAY	SATURDAY	SUNDAY
0900 1100	HANDOUT QUESTIONNAIRE B - EAST GATE	ROGERS PASS CENTRE - A					
1100 1300		ROGERS PASS CENTRE - C	SKUNK CABBAGE PICNIC AREA - D				
1300 1500	ROGERS PASS CENTRE - F	HANDOUT QUEST. F - EAST GATE					
1500 1700	ILLECILLEWAET CAMPGROUND - E						
1500 1700	HANDOUT QUEST. F - WESTGATE						
0900 1100		ROGERS PASS GAS STATION- B	ROGERS PASS GAS STATION - F				
1100 1300	ROGERS PASS GAS STATION - A						
1300 1500							
1500 1700	ROGERS PASS GAS STATION- E	ROGERS PASS GAS STATION - C					

7.3 APPENDIX C

QUESTIONNAIRES

Questionnaire

SECTION A. OVERALL OBJECTIVES

Hi, I'm working for Parks Canada. We would like to improve our Park radio transmission and need to know what you learned from the broadcast or what you know about the Park. May I ask you a few questions please?

1. Did you listen to the Park radio transmission in this park?

2. What national park are you in?

3. What is the group of mountains in this area called?

4. Where would you go now to get more information about this Park?

5. Will you visit Roger's Pass Centre?

6. **IF YES** - Where did you hear about the Centre?

7. What kinds of information about the Park would you like to hear on a radio transmission?

   When special goat warning tapes are playing.

8. What hazard might you encounter on the highway at this time?

THANK YOU

TB/CT-Reg. B6098-8

SECTION B. EAST GATE

Hi, I'm working for Parks Canada. We would like to improve our Park radio transmission and need to know what you learned from the broadcast or what you know about the Park. May I ask you a few questions?

1. Did you listen to the Park radio transmission at the East Gate?

2. What recreational facilities are available in Mount Revelstoke/Glacier National Park?

3. What is one distinctive feature of the Columbia Mountains?

4. What is in Rogers Pass Centre?

5. Where in Rogers Pass can you talk to a Park Naturalist?

6. How many Park radio transmissions are there in Glacier National Park?

7. Where are the nearest picnic facilities to the East Gate?

8. What park is Giant Cedars Picnic Area in?

9. Are the campgrounds open or closed?

During special tape conditions.

10. What potential hazards should be watched for on the road?

11. If you see wildlife when you are driving, where can you stop?

THANK YOU

TB/CT-Reg. B6098-8

SECTION C. ROGERS PASS

Hi, I'm working for Parks Canada. We would like to improve our Park radio transmission and need to know what you learned from the broadcast or what you know about the Park. May I ask you a few questions please?

1. Did you listen to the Park radio transmission here?

2. What is this place called?

3. What national park is Rogers Pass in?

4. What happened when the railway was first built over Rogers Pass?

5. What is in Rogers Pass Centre?

6. Where in Rogers Pass can you talk with a Park Naturalist?

7. What is the importance of Rogers Pass?

8. Where can you get a free guide to Rogers Pass?

For taples 1,4,6

9. Before you go hiking or climbing in the park what must you do?

For tape #3

10. What activities do naturalists offer?

11. How long are the hikes?

12. When and where do the hikes start?

THANK YOU

TB/CT-Reg. B6098-8

SECTION D. WEST GATE

Hi, I'm working for Parks Canada. We would like to improve our Park radio transmission and need to know what you learned from the broadcast or what you know about the Park. May I ask you a few questions please?

1. What is one distinctive feature of the Columbia Mountains?

2. What is in Rogers Pass Centre?

3. Where in Rogers Pass can you talk with a Park Naturalist?

4. How many radio transmissions can you listen to in Revelstoke/Glacier National Park?

5. Are there any campgrounds in Mount Revelstoke National Park?

6. What sites does Mount Revelstoke National Park offer for stopping along the highway?

7. What else can you do at the Picnic Areas besides picnic?

8. How far can you drive up Mount Revelstoke?

9. Did you listen to the Park radio transmission?

10. If yes, what further information would you like to hear?

11. Did you find the low powered radio transmission boring, fine, interesting or extremely interesting?

THANK YOU

TB/CT-Reg. B6098-8

SECTION E. BEHAVIOURAL

Hi, I'm working for Parks Canada. We would like to improve our Park radio transmission and need to know what you learned from the broadcast or what you know about the Park. May I ask you a few questions please?

1. Did you see the Parks radio transmission sign?

2. **If yes** - what information do you think the transmission provides?

3. Did you listen to the transmission?

4. **If no** - why not? **If yes** - did you hear all of it?

   There are two transmissions in this Park:

5. Did you try to tune in to both transmissions?

6. What was the quality of the transmission?

7. Did you listen to both transmissions completely?

8. Do you plan to stop or did you stop in the Park?

9. **If yes** - where?

10. Have you been to this Park before?

THANK YOU

TB/CT-Reg. B6098-8

SECTION F. DEMOGRAPHICS AND AFFECTIVE OBJECTIVES

Hi, I'm working for Parks Canada. We would like to improve our Park radio transmission and need to know what you learned from the broadcast or what you know about the Park. May I ask you a few questions please?

1. Are you with your family? (If yes): Are there children under 16 with you?

2. Do you have an AM radio in your car?

3. Do you have an FM radio in your car?

4. Did you listen to the Park radio transmission in this Park? If no - why not?

5. Have you ever tried to listen to a Parks radio transmission in another national park?

6. If yes - could you receive the transmission?

7. Do you try to listen to the radio broadcasts every time you enter a national park?

For visitors who listened to the LPRT:

8. On a scale of 1 to 5 (5 is most positive) how would you rate the radio transmission considering:

   a. amount of information
   b. interest
   c. understanding
   d. usefulness

THANK YOU

TB/CT-Reg. B6098-8

SECTION A: OVERALL OBJECTIVES

DATE: _____ STINT START TIME: _____ END TIME: _____ TAPE: _____ VERSION: ____

WEATHER: 1. sunny/clear 2. overcast 3. rain/snow

1. hot 2. warm 3. cool 4. cold

ATC END READING: _____ TOTAL APPROACHED: _____

START READING: _____ TOTAL REFUSED: _____

TOTAL: (v/a) _____ TOTAL INTERVIEWED: _____

CONTACT NO.	PARTY SIZE	1	2	3	4	5	6	7	8
		Y N	R/G _____	COL _____	RPC _____	Y N	_____	_____	goats _____
		Y N	R/G _____	COL _____	RPC _____	Y N	_____	_____	goats _____
		Y N	R/G _____	COL _____	RPC _____	Y N	_____	_____	goats _____
		Y N	R/G _____	COL _____	RPC _____	Y N	_____	_____	goats _____
		Y N	R/G _____	COL _____	RPC _____	Y N	_____	_____	goats _____
		Y N	R/G _____	COL _____	RPC _____	Y N	_____	_____	goats _____
		Y N	R/G _____	COL _____	RPC _____	Y N	_____	_____	goats _____
		Y N	R/G _____	COL _____	RPC _____	Y N	_____	_____	goats _____
		Y N	R/G _____	COL _____	RPC _____	Y N	_____	_____	goats _____
		Y N	R/G _____	COL _____	RPC _____	Y N	_____	_____	goats _____

SECTION B: EAST GATE

DATE: _____ STINT START TIME: _____ END TIME: _____ TAPE: _____ VERSION: _____

WEATHER: 1. sunny/clear 1. hot
2. overcast 2. warm
3. rain/snow 3. cool
4. cold

ATC END READING: _____ TOTAL APPROACHED: _____
START READING: _____ TOTAL REFUSED: _____
TOTAL: _____ TOTAL INTERVIEWED: _____
vehicles/axles

CONTACT NO	PARTY SIZE	1	2	3	4	5	6	7	8	9	10	11
		Y N	CMP'G PIC'G		EXHB ID TH	RPC	2	1 km east	R	O C	GOATS	
		Y N	CMP'G PIC'G		EXHB ID TH	RPC	2	1 km east	R	O C	GOATS	
		Y N	CMP'G PIC'G		EXHB ID TH	RPC	2	1 km east	R	O C	GOATS	
		Y N	CMP'G PIC'G		EXHB ID TH	RPC	2	1 km east	R	O C	GOATS	
		Y N	CMP'G PIC'G		EXHB ID TH	RPC	2	1 km east	R	O C	GOATS	
		Y N	CMP'G PIC'G		EXHB ID TH	RPC	2	1 km east	R	O C	GOATS	

SECTION C: ROGERS PASS

DATE: _____ STINT START TIME: ___ END TIME: ___ TAPE: _____ VERSION: _____

WEATHER: 1. sunny/clear
2. overcast
3. rain/snow

1. hot
2. warm
3. cool
4. cold

ATC END READING: _____ TOTAL APPROACHED: _____

START READING: _____ TOTAL REFUSED: _____

TOTAL: _____ TOTAL INTERVIEWED: _____
veh. axles

CONTACT NO	PARTY SIZE	1	2	3	4	5	6	7	8	9	10	11	12

SECTION D: WEST GATE

DATE: _____ STINT START TIME: ____ END TIME: _____ TAPE: _____ VERSION: ____

WEATHER: 1. sunny/clear 2. overcast 3. rain/snow
1. hot 2. warm 3. cool 4. cold

ATC END READING: _____
START READING: _____
TOTAL: _____ veh. axles

TOTAL APPROACHED: _____
TOTAL REFUSED: _____
TOTAL INTERVIEWED: _____

CONTACT NO	PARTY SIZE	1	2	3	4	5	6	7	8	9	10	11

SECTION E: BEHAVIOURAL

DATE: _____ STINT START TIME: _____ END TIME: _____ TAPE: _____ VERSION: _____

WEATHER: 1. sunny/clear 2. overcast 3. rain/snow

1. hot 2. warm 3. cool 4. cold

ATC END READING: _____

START READING: _____

TOTAL: _____ veh./axles

TOTAL APPROACHED: _____

TOTAL REFUSED: _____

TOTAL INTERVIEWED: _____

CONTACT NO	PARTY SIZE	1	2	3	4	5	6	7	8	9	10	11	12
		Y N		Y N			Y N	Y N	Y N	Y N	Y N	Y N	Y N
		Y N		Y N			Y N	Y N	Y N	Y N	Y N	Y N	Y N
		Y N		Y N			Y N	Y N	Y N	Y N	Y N	Y N	Y N
		Y N		Y N			Y N	Y N	Y N	Y N	Y N	Y N	Y N
		Y N		Y N			Y N	Y N	Y N	Y N	Y N	Y N	Y N
		Y N		Y N			Y N	Y N	Y N	Y N	Y N	Y N	Y N
		Y N		Y N			Y N	Y N	Y N	Y N	Y N	Y N	Y N
		Y N		Y N			Y N	Y N	Y N	Y N	Y N	Y N	Y N

SECTION F: DEMOGRAPHICS AND AFFECTIVE OBJECTIVES

DATE: _____ STINT START TIME: _____ END TIME: _____ TAPE: _____ VERSION: _____

WEATHER: 1. sunny/clear 2. overcast 3. rain/snow — 1. hot 2. warm 3. cool 4. cold

ATC END READING: _____ START READING: _____ TOTAL: _____ veh/axles

TOTAL APPROACHED: _____ TOTAL REFUSED: _____ TOTAL INTERVIEWED: _____

CONTACT NO	PARTY SIZE	1	2	3	4	5	6	7	8a	8b	8c	8d
		Y N	Y N	Y N	Y N	Y N	Y N	Y N				
		Y N	Y N	Y N	Y N	Y N	Y N	Y N				
		Y N	Y N	Y N	Y N	Y N	Y N	Y N				
		Y N	Y N	Y N	Y N	Y N	Y N	Y N				
		Y N	Y N	Y N	Y N	Y N	Y N	Y N				
		Y N	Y N	Y N	Y N	Y N	Y N	Y N				
		Y N	Y N	Y N	Y N	Y N	Y N	Y N				
		Y N	Y N	Y N	Y N	Y N	Y N	Y N				
		Y N	Y N	Y N	Y N	Y N	Y N	Y N				

7.4 APPENDIX D

ANALYSIS AND TABLES

In order to provide statistically valid results and conclusions, SEB provided the statistical instructions to the regional office regarding

(a) construction of confidence limits for various sample estimates

(b) comparison of the survey results with measureable objectives

(c) comparison of the results obtained from the listeners with those obtained from non-listeners to the LPRT

(d) calculation of weight factors.

Before outlining the various steps for the procedures to be used for achieving the above, it is important to summarize the sample design used in the survey.

It is to be noted that, according to the Planning Report, a four-stage random sample design was used for collecting the appropriate data during summer 1983 for various objectives of the study.

At the first-stage, the days were selected. At the second-stage, the stints were selected within each selected day. At the third stage, the vehicles were selected in each selected stint. At the alternate or the fourth-stage, a visitor was selected within each vehicle. The third-stage units or vehicles were selected by using a floating sample. In other words, first a vehicle was selected on the basis of a specified selection criterion. Then a visitor was selected in the selected vehicle. The selected visitor provided the necessary responses to the questionnaire. After recording the responses of this visitor, another vehicle was selected and consequently another visitor was selected. This process of selecting third-stage and fourth-stage units was continued till the stint time was over.

Calculation of Weights:

Due to the following facts, the exact weights could not be calculated. These facts are obtained by examining the survey schedules, which were prepared and followed in the survey, and the data sheets.

(1) The survey schedule was prepared only for the month of July 1983 and, therefore, the results obtained in the month of July may or may not be valid for the other months of the summer season. It is to be noted, however, that, for selecting the days or the primary units, the sample frame used was from July 6, 1983 to July 31, 1983.

(2) According to the survey schedule, which was followed during the survey, it shows that (i) the observations were made in the period between July 6, 1983 to July 11, 1983; this was due to the bad weather conditions; the original weights for these days are no longer valid under the present condition; (ii) a new schedule was prepared for the period between August 22, 1983 to August 31, 1983; the results obtained for this survey period may not be valid for the earlier part of the month of August 1983.

(3) The changes were made in the original sample size determined for the second-stage units within each primary unit. It was decided to use a sample of two stints in each day. These changes made it difficult to calculate exact weighing factor for the second-stage units.

(4) Although the necessary data for calculating the weighing factor for the third stage units could be approximated, it was felt to be insufficient for calculation purposes so this factor was not determined.

On the basis of these facts, it is impossible to calculate the exact weights and hence we cannot estimate various seasonal totals. Due to lack of appropriate weights, our analysis is based upon the unweighted data. It is to be noted that the unweighted data might produce estimates of the population parameters slightly different from those estimates which are based upon the weighted data. But, with regard to general conclusions, both types of data would not produce significant differences.

Sampling Problems

Visitors were interviewed on a floating sample basis. As the visitor entered the site, the evaluator approached and asked if he/she would answer a few questions. If the visitor responded positively, the questionnaire was administered. For all sites except Rogers Pass Centre 100% of the visitors could be sampled. At the Centre, visitation was high and many visitors were on bus tours, therefore, the sample was much less than 100%. An hourly visitation count was taken by Visitor Services personnel at the Centre, and this was used for statistical analysis of the data.

Problems with the sample size occurred at the pulloffs and at Skunk Cabbage and Giant Cedars Picnic Areas. The pull-offs had very few visitors, maybe one or two vehicles per hour. The East Gate LPRT was tested at this site but also at the Centre and therefore a good sample size was obtained. The hand out questionnaire also increased the sample size.

However, the West Gate was only tested at the Picnic Areas since the Centre was so far from the Gate (about 50 km.). Therefore, the sample size was extremely low. In addition, due to a misunderstanding, ony 360 of 500 questionnaires were handed out, and the sample size for these objectives is small. The sample size is reflected in the confidence limit - a small sample size results in a broad confidence limit.

1. Construction of Confidence Limits for Various Proportions.

For constructing confidence limits we need an estimate of the standard error of the proportion. To do this we can estimate the proportion to follow a binomial distribution. In other words, if w is the number of visitors entering the park, x is the number of visitors listening to the LPRT, p is the proportion of listeners then

$$P = \frac{x}{w}$$

with a standard error of

$$Sp = \sqrt{\frac{P(1-P)}{w}}$$

The confidence limit at the 95% limit will then be p + tSp where t is approximated as 1.645.

Although the confidence limit applies to the results it should be mentioned that, because this value is to be compared to the target percent, then the target percent should have been used to calculate the confidence limit. Also, since we are only concerned if the result is less than the target, then a one tailed test should have applied. These factors change the confidence limits by only about 1% ie. the number of visitors who try to tune in the LPR is 29^{+} 3% not $29 \pm$ 4%. Because the change was so small it was not considered worthwhile reapplying the calculations.

2. Comparison of the Sample Estimate with the Value Specified under the Objectives of Study.

For this purpose the target of the objective (P) will be compared to the sample estimate (p) already determined. The hypotheses are then constructed:

Null hypothesis $p = P$
Alternative hypothesis $P > p$

Using the standard error previously obtained
$t_o = \sqrt{\frac{(P-p)}{Sp}}$

This is compared with $t = 1.645$ and if t_o is higher than the sample value at 5% level of significance, ie. $t_o > t$,

there is a significant difference. If $t_o \leq t$ there is no significant difference between the sample estimate and the target.

3. Comparison of the Sample Estimate of Listeners with that of Non Listeners

Let p(L) be the sample estimate for listeners and $S^2p(L)$ be its variance. Similarly p(NL) shall be the sample estimate for non-listeners and $S^2p(NL)$ be its variance. From this then

$$t_o = \frac{p(L) - p(NL)}{\sqrt{S^2p(L) + S^2p(NL)}}$$

Using t = 1.645 the following conclusions can be made.

If $t_o > t$ then the sample estimates of both types of visitors are significantly different.

If $t_o \leq t$ then there is no statistical evidence that these sample estimates are different.

The above analysis was used for calculation of the results. However, to determine the percent of visitors who listened to the program and then visited certain sites i.e. Giant Cedars Picnic Area, would have resulted in invalid data. The confidence limits would have been broader than the result. Therefore this data was not included.

Mount Revelstoke/Glacier National Park
Low Powered Radio Transmission
Measurable Objectives

Overall Objectives

1. Of the people who enter the Park in a vehicle equipped with a radio

   30% will attempt to receive one LPRT.

   Result - n = 706 x 94% (% w radio)
   n = 671

   Total who tried to listen - 195 = 29 ±3%
   Total who listened to the LPRT - 121 = 18% ±2.4

   Of the people who listen to the LPRT

2. 90% will know they are in Mount Revelstoke or Glacier National Park.

   Result - n = 76

   Total right - 65 = 86% ± 7

   Of those who did not listen to the LPRT

   n = 332

   right = 216 = 65% ± 4

3. 70% will know they are in the Columbia Mountains.

   Result - n = 49

   right = 29 = 59% ±12%

   Of those who did not listen to the LPRT

   n = 200

   right = 75 = 38% ±6%

4. 70% will know they can obtain further information concerning the park at Roger's Pass Centre.

   Result - n = 49

   right = 33 - 67% ± 11

Of those who did not listen to the LPRT

n = 200

right = 75 = 38% ±7

5. 60% will visit Roger's Pass Centre as a result of listening to the broadcast.

Listened to broadcast n = 28
visit R.P.C. = 20 = 71% ±14

Did not listen to LPRT n = 54
visit R.P.C. = 21 = 39% ±11

Visit R.P.C. due to tapes - 32 ±14%

6. During special goat warning conditions, 70% will know there is a potential hazard.

NO RESULTS

A. Cognitive Objectives

I. <u>East Gate transmission tapes 1, 2, 3, 4, 5</u>

Of the people who listen to the East Gate transmissions.

7. 70% will know where there are camping and picnic facilities available in the Park.

Result - n = 31

right = 23 = 74% ±13

Of those who did not listen to the LPRT

n = 11%

right = 74 = 62% ±7

8. 70% will know at least one distinctive feature of the Columbia Mountains.

Result - n = 31

right = 12 = 39% ±14%

Of those who did not listen to the LPRT

n = 11%

right = 10 = 8% ±4

9. 70% will know there are exhibits and an indoor theatre at Roger's Pass Centre.

Result - n = 31

right = 10 = 32% ±14

Of those who did not listen to the LPRT

n = 119

right = 20 = 17% ±6

10. 70% will know there is a Park Naturalist on duty at Roger's Pass Centre.

Result - n = 31

right = 16 = 52% ±15

Of those who did not listen to the LPRT

n = 119

right = 24 = 20% ±6

11. 60% will know that there is another LPRT in the Park.

Result - n = 31

right = 31 = 42% ±15

Of those who did not listen to the LPRT

n = 119

right = 13 = 11% ±5

12. 40% will know the nearest picnic facilities are located 1 km. to the east.

Result - n = 31

right = 10 = 32% ±14

Of those who did not listen to the LPRT

n = 119

right = 17 = 14% ±5

13. 40% will know Giant Cedars Picnic Area is located in Mount Revelstoke National Park.

Result - n = 31

right = 6 = 19% ±12

Of those who did not listen to the LPRT

n = 11

right = 15 = 13% ±5

14. 40% will know that the campgrounds are open/closed.

Result - n = 16

right = 15 = 94% ±10

Of those who did not listen to the LPRT

n = 62

right = 46 = 74% ±9

Of the people who listen to the summer special condition tape.

15. 70% will know mountain goats are on the highway and in the snowsheds.

16. 70% will know they must drive carefully.

17. 70% will know they should stop in an unsafe area if they see a goat.

RESULT NOT AVAILABLE

II <u>Roger's Pass transmission tapes 1, 2, 3, 4, 5, 6</u>

Of the people who listen to the Roger's Pass LPRT.

18. 80% will know they are at Roger's Pass.

Result - n = 23

right = 20 = 87% ±12

Of those who did not listen to the LPRT

n = 116

right = 74% ±7

19. 80% will know Roger's Pass is in Glacier National Park.

Result - n = 27

right = 25 = 93% ±8

Of those who did not listen to the LPRT

n = 132

right = 97 = 73% ±6i

20. 70% will know the first railway was defeated by avalanches.

Result - n = 27

right = 17 = 63% ±15

Of those who did not listen to the LPRT

n = 131

right = 30 = 23% ±6

21. 70% will know there are exhibits and an indoor theatre at Roger's Pass Centre.

Result - n = 21

right = 11 = 58% ±19

Of those who did not listen to the LPRT

n = 105

right = 16 = 15% ±6

22. 70% will know there is a Park Naturalist on duty at Roger's Pass Centre.

Result - n = 26

right = 15 = 58% ±16

Of those who did not listen to the LPRT

n = 120

right = 19 = 16% ±5

23. 60% will know Roger's Pass is the only transportation route across the Central Columbia Mountains.

Result - n = 27

right = 18 = 67% ±15

Of those who did not listen to the LPRT

n = 130

right = 67 = 52% ±7

24. 50% will know a free guide to Roger's Pass is available at the Roger's Pass Centre or any Park office.

Result - n = 27

right = 19 = 70% ±15

Of those who did not listen to the LPRT

n = 128

right = 43 = 34% ±7

For Tapes 1, 4 and 6

25. 10% will know they must register for climbing and hiking at the Administration Building.

Of the people who listen to special conditions tape #3.

26. 40% will know the naturalists are leading hikes into the backcountry.

27. 40% will know the hikes start at 10:00 a.m.

28. 40% will know the hikes are 4-5 hours long.

29. 40% will know the hikes start in Illecillawaet campground.

Of the people who listened to goat warning tape #4.

30. 70% will know mountain goats are on the highway and in the snowshed.

31. 70% will know they must drive carefully.

32. 70% will know they should not stop in an unsafe area if they see a goat.

RESULT - NOT AVAILABLE

III <u>West Gate transmission tapes 1, 2, 3, 4, 5,</u>

Of the people who listen to the West Gate LPRT.

33. 70% will know at least one feature of the Columbia Mountains.

Result - n = 11

right = 2 = 18% ±1%

Of those who did not listen to the LPRT

n = 46

right = 7 = 15% ±%

34. 70% will know there are exhibits and an indoor theatre at Roger's Pass Centre.

Result - n = 11

right = 8 = 73% ±22

Of those who did not listen to the LPRT

n = 46

right = 12 = 26% ±11

35. 70% will know there is a Park Naturalist on duty at Roger's Pass Centre.

Result - n = 11

right = 10 = 91% ±14

Of those who did not listen to the LPRT

n = 46

right = 16 = 35% ±12

36. 60% will know there is another transmission at Roger's Pass.

Result - n = 11

right = 2 = 18% ±19

Of those who did not listen to the LPRT

n = 46

right = 6 = 13% ±8

37. 40% will know there are no campgrounds in Mount Revelstoke National Park.

Result - n = 11

right = 4 = 36% ±24

Of those who did not listen to the LPRT

n = 46

right = 13 = 28% ±11

38. 40% will know there are picnic sites in the Park.

Result - n = 11

right = 8 = 73% ±2

Of those who did not listen to the LPRT

n = 46

right = 26 = 56% ±12

39. 40% will know there is a boardwalk through the rainforest at Giant Cedars Picnic Area and at Skunk Cabbage.

Result - n = 11

right = 7 = 64% ±24

Of those who did not listen to the LPRT

n = 46

right = 20 = 43% ±12

40. 40% will know the road to the summit of Mt. Revelstoke is open/open partway.

Result - n = 11

right = 4 = 36% ±24

Of those who did not listen to the LPRT

n = 46

right = 8 = 17% ±9

B. Behavioural Objectives

Of the people entering the Park

41. 50% will see the LPRT sign.

Result - n = 175

saw sign = 128 = 73% ±5

Of the people who see the LPRT sign.

42. 35% will understand the LPRT provides information on the Park, the campground and the facilities.

Result - n = 98

right = 19 = 19% ±7

Of the people entering the Park in a vehicle equipped with a radio.

43. 25% will attempt to receive two transmissions.

Result - n = 175 x 94%

= 165

Listen to the two transmissions - 21 = 13% ±4

44. 20% will listen to both complete transmissions.

Result - n = 165

Listen to both complete transmissions - 13 = 8% ±3

Of the people receiving the LPRT transmission in the Park.

45. 60% will stop in the Park.

Result - n = 7

stopping - 4 = 57% ±31

46. 60% intend to use Park facilities.

Result - n = 7

To use Park facilities - 4 = 57% ±31

47. 20% will be repeat visitors.

Result - n = 26

repeat visitors - 9 = 35% ±15

Of the people who listen to Roger's Pass LPRT.

48. 70% will visit Roger's Pass Centre.

Results - n = 21

Visit Centre = 11 = 52% ±18

Of the people who listen to the East Gate and West Gate LPRT.

49. 30% will visit Skunk Cabbage and/or Giant Cedars.

Results - NA

Of the people who listen to the West Gate LPRT, #3, 4 and East Gate LPRT #3, 4.

50. 10% will stop at the campground.

Results - NA

C. <u>Affective Objectives</u>

Of the people who listen to the LPRT

51. 60% will find it useful.

Results - n = 39

x = 37 = 95% ±6

52. 80% will find the information easy to understand.

Results - n = 35

x = 28 = 80% ±11

53. 80% will find the content sufficient.

Results - n = 34

x = 27 = 79% ±11

54. 80% will find the LPRT interesting.

Results - n = 18

x = 17 = 94% ±9

55. 80% will want to hear information on the Park's historic features.

Results - n = 179

x = 21 = 12% ±2

56. 80% will want to hear information on the Park's natural features.

Results - n = 179

x = 39 = 22% ±5

57. 60% will want to hear information on the Park's facilities and services.

Results - n = 179

x = 75 = 42% ±7

D. <u>Demographic Assumptions</u>

Of the people entering the Park.

58. 10% had predetermined Mt. Rev./Glacier National Park as a destination/stopping point.

Results - n = 988

x = 60 = 6% ±1

59. 70% are repeat traffic.

Results - n = 146

x = 79 = 54% ±7

60. 50% are family units with children under 16.

Results - n = 265

x = 77 = 29% ±5

61. 90% of the private vehicles have radios with AM frequency reception.

Results - n = 263

x = 247 = 94% ±2

(FM radio reception

n = 263

x = 147 = 56 ±7)

62. 25% will have attempted to receive another Canadian National Park LPRT at least once.

Results - n = 263

x = 105 = 40% ±5

Of the people who attempted to receive a broadcast in a Canadian National Park.

63. 25% will have listened to the entire transmission.

Results - n = 29

x = 21 = 72% ±14

Of the people who visit National Parks

64. 5% will attempt to receive the LPRT on every visit.

Results - n = 706

x = 13 = 2% ±1

II Roger's Pass transmission tapes 1 - short and ong versions.

Of the people who listen to the Roger's Pass LPRT.

65. 80% will know they are at Roger's Pass.

Tape Version -	Short	Long
	n = 15	n = 8
	x = 13	x = 7
	= 87% ±14	= 88% ±19

66. 80% will know Roger's Pass is in Glacier National Park.

Tape Version -	Short	Long
	n = 15	n = 12
	x = 14	x = 11
	= 93% ±10	= 92% ±13

67. 70% will know the first railway was defeated by avalanches.

Tape Version -	Short	Long
	n = 15	n = 12
	x = 11	x = 6
	= 73% ±19	= 50% ±24

68. 70% will know there are exhibits and an indoor theatre at Roger's Pass Centre.

Tape Version -	Short	Long
	n = 10	n = 11
	x = 5	x = 5
	= 50% ±26	= 45% ±25

69. 70% will know there is a Park Naturalist on duty at Roger's Pass Centre.

Tape Version -	Short	Long
	n = 15	n = 11
	x = 10	x = 5
	= 67% ±20	= 45% ±25

70. 60% will know Roger's Pass is the only transportation route across the Central Columbia Mountains.

Tape Version -	Short	Long
	n = 15	n = 12
	x = 11	x = 7
	= 73% ±19	= 58% ±23

71. 50% will know a free guide to Roger's Pass is available at the Roger's Pass Centre or any Park office.

Tape Version -	Short	Long
	n = 15	n = 12
	x = 11	x = 8
	= 73% ±19	= 67% ±22